Assignee Docket No.: H0004534
Attorney Docket No.: 2929-0249P
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
William LORENZ

Application No.: 10/723,904 Confirmation No.: 1129

Filed: November 26, 2003 Art Unit: 3746

For: HIGH ACCURACY FUEL METERING SYSTEM FOR TURBINE ENGINES Examiner: L. J. Casaregola

DECLARATION UNDER 37 C.F.R. 1.131

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

The undersigned hereby declares as follows:

1. I am partner at Birch, Stewart, Kolasch & Birch (hereinafter "BSKB") and have been a partner at BSKB since before March 17, 2003.

2. I have reviewed BSKB's file number 2929-0249P relating to patent application no. 10/723,904, (hereinafter "the subject application") and BSKB's file 2929-0207P relating to provisional patent application 60/506,744 (hereinafter, "the provisional application").

3. Attached hereto as Exhibit A is a copy of a client letter dated March 17, 2003, and a redacted copy of an invention disclosure that, based on the date stamp, were received in the offices of BSKB on March 19, 2003.

4. I believe that disclosure and drawings of Exhibit A establish that the invention disclosed in the subject application was conceived at least as early as March 17, 2003.

5. Attached hereto as Exhibit B is a copy of a "Transfer Slip." The initials on this transfer slip show that I transferred 2929-0207P to associate attorney Daniel K. Dorsey, (DKD)

Reg. No. 32,520, on May 19, 2003. It is and has been my general practice to receive and briefly review patent disclosures from the assignee of the present application and to assign these disclosures to associate patent attorneys for the preparation of patent applications based on my workload, their workloads and the filing deadlines for the applications.

6. Attached hereto as Exhibit C is a redacted copy of an "Attorney Time Ticket" showing the time spent by Mr. Dorsey preparing the provisional application. Mr. Dorsey is no longer employed by BSKB.

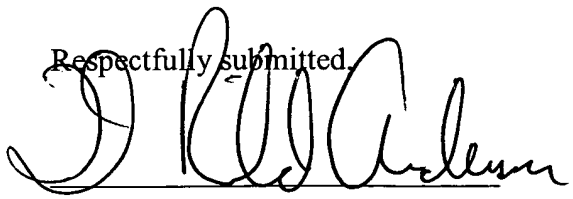
7. I believe that Exhibit C establishes that Mr. Dorsey was working on the provisional application between July 24, 2003, and September 29, 2005. The provisional application was filed on September 30, 2005.

8. It is believed that above information establishes that the inventor of the present application conceived the invention claimed in the subject application before the effective filing date of U.S. Patent Application No. 2005/0013706 (hereinafter "Jansen") and provided a complete invention disclosure to BSKB before the effective filing date of Jansen. It is also believed that the above information exhibits reasonable diligence in preparing a provisional patent application during the critical period (from a time before the effective filing date of the Jansen application up until the September 30, 2003, filing date of the provisional application).

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of this application or any patent issued thereon.

Dated: September 15, 2005

Respectfully submitted,



D. Richard Anderson, Reg. No. 40,439

EXHIBIT A

Honeywell

Law Department
3520 Westmoor Street
South Bend, IN 46628-1373
(574) 231-2319

New Item

DRA
3929-207P
CW
5-19-03
TBFA
9-30-03

Docketed
Computer

March 17, 2003

Mr. D. Richard Anderson
Birch, Stewart, Kolasch & Birch
8110 Gatehouse Road
Falls Church, Virginia 22040-0747

Reviewed by Manager
To be Filed (Check Request)
To be Filed (Priority/Bar Date) 9/30/03

Re: New Honeywell Disclosure No. H0004534
ENTITLED: "SIMPLE HIGH ACCURACY FUEL METERING SYSTEM FOR TURBINE ENGINES"

Dear Rick:

Please prepare a utility application for the referenced case. I have enclosed a copy of the disclosure, prior art search and references.

Inventor William Lorenz (574 / 231-3583) is your contact. Please provide the estimated cost for preparation of this application. **This case must be filed no later than September, 2003**.

Very truly yours,

Larry J. Palguta
Senior Attorney

Enclosures

cc: W. Lorenz

Honeywell CONFIDENTIAL
ATTORNEY-CLIENT PRIVILEGED

Invention Record (Docket) No.: **H0004534**

Origin Date: **10/01/2002**

SBE: **1140 - S.Bnd., IN - ESA - SOUTH BEND (E&S)**

Attorney(s): **Palguta, Larry -**

File Location: **SB - South Bend, IN**

Title: **Simple High Accuracy Fuel Metering System for Turbine Engines**

Inventor: **Lorenz, William**
Address: [redacted]
Phone: [redacted] Fax: [redacted]
Citizenship: **US**

SSN: **********
County: [redacted]
Supervisor: [redacted]

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1. Briefly describe the technical or commercial problem or need that this invention is intended to solve.
Current methods for fuel metering to a turbine engine are complex and expensive if high accuracy is required. This method provides high accuracy fuel metering with a simple method.

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2. Briefly describe how this invention solves the problem or meets the need.
This method uses a low leakage piston pump. Fuel metering is accomplishe by using a variable speed electric motor to drive the piston pump. Fuel flow is the directly proportional to motor speed. Using a brushless dc motor speed can be controlled very accurately.

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3. Describe how to make and use the invention. Please indicate which embodiment(s) are preferred and describe the best way known to you to practice the invention. Attach relevant documents. (If the invention is a device or process, please provide a drawing or flow chart.) (If you are unfamiliar with the contents and preparation of a patent application, please refer to the Guidelines for the Preparation of Invention Disclosures.
The embodiement of this method is shown in the attached schematic. The schematic shows a complete fuel controlwich in addition to the invention also contains elemints such as a fuel filter, a shut off solenoid and a temperature sensor. The key elements of the invention a re the speed controlled electric motor and the piston pump. Since the piston pump is a very low leakage device, speed control of the motor is the main driver for fuel metering accuracy. Accuracy of +/- 2% over the entire fuel flow range of a turbine engine can be achieved using this method.
Document(s):
H0004534_MU1_Piston Pump Fuel control.ppt

4(a). To the best of your recollection what is the earliest date on which the invention was conceived? Who conceived the invention? Attach documents which evidence the foregoing.

Conception Date: **5-15-02** Who conceived it?: **william Lorenz**
Document(s):

4(b). Is there a non-inventor who witnessed the conception? If so, please identify him/her and attach any documents which evidence the witnessing.
yes
Witness Name: **Steve Emo** Witness Phone: **574-231-3097** First Practice Documents:

5(a). To the best of your recollection, what is the earliest date on which the invention was reduced to practice (i.e. made)? Who reduced the invention to practice. Attach documents which evidence the foregoing. If no reduction to practice, type "n/a".

First Practice Documents:
First Practice Date: Who reduced it to practice?:

5(b). Is there a non-inventor who corroborated the reduction to practice? If so, please identify him/her, the corroborating activity (i.e., over-the-shoulder corroboration or repeating the experiment), and the date of the activity. Attach documents which evidence the foregoing.

Non-inventor corroborator?: First Corroborator Name: First Corroborator Phone:

First Practice Corroboration Date: First Practice Corroborator Activity:

Document(s) related to corroboration event:

5(c). For each example of the invention and each comparative example on which you intend to rely in the patent application, please indicate when the example was generated, who conducted the experiment and where this example is recorded (e.g., volume, page and author or laboratory notebook) and attach a copy of these records. If no example available, type "n/a".
Example(s):

Example Date:
Who conducted the experiment?:
Where is example recorded?:

6(a). Did this invention arise in a program that is funded in whole or part by the U.S. Government or another company, or any entity other than Honeywell?
No

6(b). If so, please identify the program (including government contract number, if applicable) and the entity sponsoring the program and provide a copy of any agreement between the parties concerning the program.

Outside Funding Program:
Contract Number *(if applicable)*:
Outside Funding Entity:
Document(s) related to funding agreement:

7(a). To your knowledge, is this invention subject to any agreement between Honeywell and a third party (e.g., a secrecy agreement, license agreement, joint development agreement, etc.)?
no

7(b). If so, please identify the agreement and the other party and attach a copy of the agreement if one is available.
Third party agreement ID:
Third party name:
Document(s) related to any third party agreement:

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8. You have a duty to disclose to the U.S. Patent and Trademark Office all relevant prior art of which you are aware. Please list all such prior art (e.g., patents, publications, brochures, Honeywell and third-party products) known to you. If a prior art search has been conducted, it must be included. Briefly indicate how this invention is different from the prior art. See 1 and 2 above.
List of prior art:

Piston pumps have been used in fuel controls for many years
How invention is different from the prior art:
As far as we know speed controlled piston pumps have not previously been used to meter fuel directly

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9(a). Has the product or process which is the subject of this invention disclosure been disclosed, sold or offered for sale to anyone outside of Honeywell or to the general public.
no

9(b). If so, when and to whom was it disclosed, sold or offered for sale? If it was disclosed, was a secrecy agreement in place? Attach documents which evidence the sale or offer for sale.

Date it was disclosed:
Whom disclosed to:
Disclosure Sales Agreement?:
Document(s) which evidence the sale or offer for sale:

9(c). Does the business intend to disclose, sell or offer to sell the invention to anyone outside of Honeywell or to the general public in the near future? If so, to whom and when is this disclosure, sale or offer for sale planned?

For whom are future sales planned:
Date future sale is planned:

10(a). Does this invention relate to any other: (i) issued patents, (ii) pending patent applications, or (iii) previously submitted invention disclosures, of Honeywell?

10(b). If so, please identify the related matter and indicate whether this is an improvement on an earlier invention: Other patents related matter is:

Is this an improvement?:

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11. Please specify the product(s) to which this invention disclosure relates.
[redacted]

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12. Please indicate keywords for identifying this invention disclosure.
fuel control, piston pump, engine control

Witness Name: _____ **Inventor Name:** _____

Witness Signature: _____ **Inventor Signature:** _____

Date: _____ **Date:** _____

Inventor Name: _____ **Inventor Name:** _____

Inventor Signature: _____ **Inventor Signature:** _____

Date: _____

Inventor Name: _____

Inventor Signature: _____

Date: _____

Inventor Name: _____

Inventor Signature: _____

Date: _____

Date: _____

Inventor Name: _____

Inventor Signature: _____

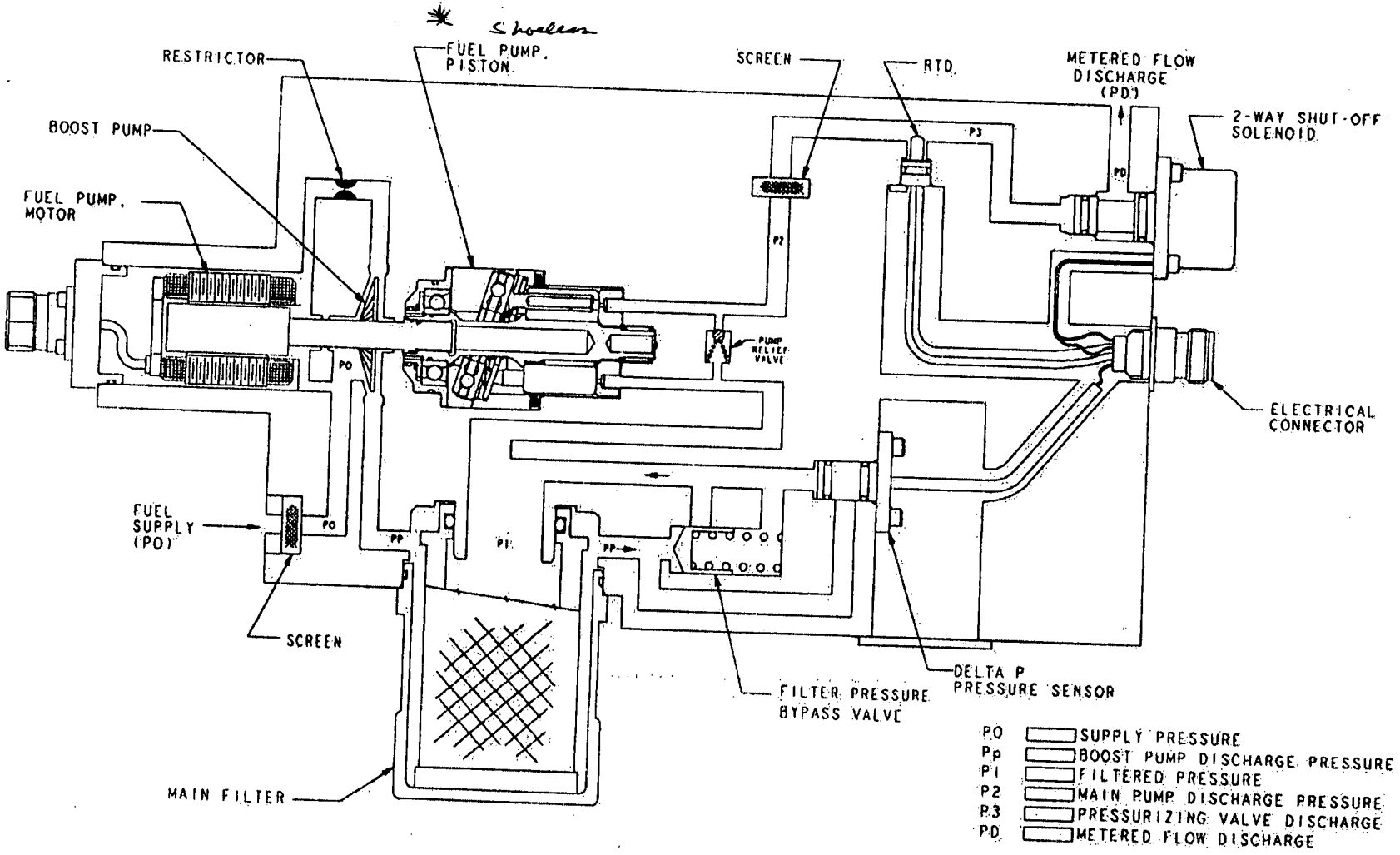
Date: _____

Inventor Name: _____

Inventor Signature: _____

Date: _____

Send to:
Larry - Palguta
3520 Westmoor Street
South Bend, IN 46628-1373
The attorney assigned to this disclosure.



Variable Speed Piston Pump

EXHIBIT B

TRANSFER SLIP

Date: 5-29-13

Requested by:

Print Name: Dorsey

Docket No. 2929-207P

To: DRA / DKD

From: _____

Due Date: _____

Check List:

Case Jacket ✓

CPI Ease _____

***PLEASE VERIFY THE INFORMATION PRIOR TO SUBMITTING TO DOCKETING*

EXHIBIT C

BIRCH, STEWART, KOLASCH & BIRCH, LLP

FINALIZED

ATTORNEY TIME TICKET (ATT)

Printed: 11 / 21 / 2003

Date: 11/18/2003 Docket Number 2929-0207P Debit Number: 592160

Attorney Time Charges:

Initials	Date Worked	Hours	Adjust-ment	Bill Status	Description	Rate	Total
DKD	08/20/2003	1.08	0.00	BNP	Telecon with inventor and receive information by email.	$	
DKD	08/05/2003	0.02	0.00	N	Draft application.	$	
DKD	08/01/2003	1.28	0.00	B	Prepare draft patent application.	$	
DKD	08/04/2003	0.02	0.00	N	Prepare patent application.	$	
DKD	08/06/2003	3.47	0.00	BNP	Continued preparation of draft application.	$	
DKD	08/02/2003	0.02	0.00	N	Prepare patent application.	$	
DKD	08/05/2003	0.02	0.00	N	Prepare application.	$	
DKD	08/05/2003	5.87	-3.23	B	Continued work on draft application; telephone conference with Bill Lorenz.	$	
DKD	09/11/2003	1.25	0.00	BNP	Continued work on draft application.	$	
DKD	08/02/2003	2.65	0.00	BNP	Prepare patent application.	$	
DKD	09/29/2003	1.17	0.00	B	Telecon with inventor. Revise application for filing.	$	
DKD	08/04/2003	4.65	0.00	BNP	Continued preparation of patent application.	$	
DKD	09/12/2003	3.82	0.00	BNP	Continued work on draft application.	$	
DKD	08/05/2003	0.02	0.00	N	Draft application.	$	
DKD	07/24/2003	1.45	0.00	B	Study disclosure material.	$	
DKD	09/23/2003	1.55	0.00	BNP	Receive further description from inventor and draft description into application.	$	
DKD	08/06/2003	0.02	0.00	N		$	
DKD	08/05/2003	0.02	0.00	N	Prepare patent application. call inventor Bill Lorenz.	$	

SUBTOTAL - SERVICES:

General Services:

Code	Atty	Description	Amount

SUBTOTAL - GENERAL SERVICES:

FINALIZED

Reviewed By:
DRA

Created By: beattys **Created Date:** 09 / 30 / 2003
Modified By: pintob **Modified Date:** 11 / 21 / 2003
Printed By: pintob **Printed Date:** 11 / 21 / 2003
Finalized By: pintob **Finalized Date:** 11 / 21 / 2003

GRAND TOTAL: